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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,563

03/25/2004

Jun Moroo

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EXAMINER

THOMPSON, JAMES A

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

10/18/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/808,563	Applicant(s) MOROO ET AL.	
	Examiner James A. Thompson	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,10-13,16-18,21,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-6,13,16-18 and 24 is/are allowed.
- 6) ☒ Claim(s) 7,10-12,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 August 2010 has been entered.

Response to Arguments

2. Applicant's arguments filed 25 August 2010 have been fully considered but they are not persuasive.

Regarding page 6, lines 1-25: Applicant is correct that claims 13, 16-18 and 24 should have been noted as allowable. Examiner notes the allowable subject matter in the present action. However, Examiner also notes a deficiency under 35 U.S.C. § 112, 2nd paragraph with respect to claim 21 which must be resolved prior to allowance. Claims 7, 10-12 and 22 remain rejected under 35 U.S.C. § 101, even with Applicant's presently entered amendments to the claims.

Regarding page 6, line 26 to page 7, line 14: Applicant's amendments to the claims do not overcome the rejections of claims 7, 10-12 and 22 under 35 U.S.C. § 101. While Applicant recites that the method is to be performed in an image processing apparatus, this is merely a nominal recitation and does not tie the method to a particular machine. The method is still a set of internal mathematical operations, and is therefore directed to an abstract idea.

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Regarding page 7, lines 15-21: In conclusion, claims 7, 10-12, 21 and 22 are rejected and claims 1, 4-6, 13, 16-18 and 24 are allowed. Applicant is respectfully invited to conduct an interview to resolve these issues so that the application may be expedited to allowance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 7 and 10-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 7 recites an image data processing method. However, the method comprises a series of digital data processing steps which simply manipulate digital data. The method is not tied to any particular apparatus, nor does the method transform any underlying subject matter to a different state or thing. The method merely performs computations upon digital data resulting in other digital data, and is thus an attempt to patent mathematical operations. While the language of claim 7 states the method is of an apparatus for processing image data, this is merely a nominal recitation and does not tie claim 7 to a *particular* machine. There is no transformation of an article or material to a different state or thing. Claim 7 is merely an abstract idea, and is therefore not a statutory process.

Claims 10-12 each ultimately depend from claim 7, and are therefore also rejected under 35 U.S.C. 101.

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5. Claim 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 22 recites an image data processing method. However, the method comprises a series of digital data processing steps which simply manipulate digital data. The method is not tied to any particular apparatus, nor does the method transform any underlying subject matter to a different state or thing. The method merely performs computations upon digital data resulting in other digital data, and is thus an attempt to patent mathematical operations. While the language of claim 22 states the method is of an embedding unit that is included in an image data processing apparatus, this is merely a nominal recitation and does not tie claim 22 to a *particular* machine. There is no transformation of an article or material to a different state or thing. Claim 22 is merely an abstract idea, and is therefore not a statutory process.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites an “embedding unit which is included in an image data processing apparatus which includes:” four separate units. However, one of the units is the embedding unit. So, does Applicant intend to only recite the embedding unit, or does Applicant wish to recite the

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elements of the image processing apparatus? Claim 21 is indefinite since it is not clear what subject matter claim 21 is meant to encompass.

Allowable Subject Matter

8. Claims 1, 4-6, 13, 16-28 and 24 are allowed. Claims 7, 10-12, 21 and 22 contain allowable subject matter, but are rejected above for reasons other than prior art.

The following is an examiner's statement of reasons for allowance and reasons for indicating allowable subject matter:

Independent claim 1 recites an image data processing apparatus for embedding coded data. The apparatus comprises:

- (1) a dividing unit that divides image data into a plurality of blocks,
- (2) a block extracting unit that extracts a pair of blocks from the divided blocks,
- (3) an index extracting unit that extracts two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of two feature indices being extracted from the other of the pair blocks,
- (4) a code embedding unit that embeds a code into the pair of blocks, by changing at least one of the extracted two feature indices of the first color component of the pair of blocks based on a magnitude relationship between the extracted two feature indices of the

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second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

The closest prior art discovered is the combination of Reed (US-2002/0164052) and Matsui (7,523,311), as cited in the previous office action of 28 October 2009. The combination of Reed and Matsui teaches (1) and (2), as well as elements of (3) and (4). However, the combination of Reed and Matsui does not teach that (a) two feature indices are extracted for the first color component and two feature indices are extracted for the second color component, (b) one of the two feature indices are extracted from one of the pair of blocks and the other of the two feature indices is extracted from the other of the pair of blocks, and (c) the two feature indices of the first color component are based on a magnitude relationship between the two feature indices of the second color component.

Examiner has not discovered this particular combination of features in the prior art, either in a single reference or in an obvious combination of references. Accordingly, claim 1 is deemed to be allowable.

Claims 4-6 each ultimately depend from claim 1, and are therefore deemed to be allowable at least due to their respective dependencies from an allowable claim.

Independent claim 7 recites an image data processing method which contains the allowable subject matter found in claim 1. Thus, claim 7 is deemed to contain allowable subject matter for the reasons set forth for claim 1. However, claim 7 is rejected above under 35 U.S.C. 101, and is therefore not presently allowable. It could, however, be deemed allowable if the issues with respect to 35 U.S.C. 101 are adequately addressed.

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Claims 10-12 each ultimately depend from claim 7 and are therefore also deemed to contain allowable subject at least due to their respective dependencies from claim 7.

Independent claim 13 recites a computer-readable medium that stores a computer program that, when executed by a computer, makes the computer perform a process. The process recited therein contains the allowable subject matter found in claim 1. Thus, claim 13 is deemed to be allowable for the reasons set forth for claim 1.

Claims 16-18 each ultimately depend from claim 13 and are therefore also deemed to be allowable at least due to their respective dependencies from claim 13.

Independent claim 21 recites an embedding unit which includes within it a series of units. The embedding unit of claim 21 contains the same allowable subject matter found in claim 1. Thus, claim 21 is deemed to contain allowable subject matter for the reasons set forth for claim 1. However, claim 21 is rejected above under 35 U.S.C. 112, second paragraph, and is therefore not presently allowable. It could, however, be deemed allowable if the issues with respect to 35 U.S.C. 112, second paragraph are adequately addressed.

Independent claim 22 recites a method of embedding a code into an image data in an image data processing method which contains the allowable subject matter found in claim 1. Thus, claim 22 is deemed to contain allowable subject matter for the reasons set forth for claim 1. However, claim 22 is rejected above under 35 U.S.C. 101, and is therefore not presently allowable. It could, however, be deemed allowable if the issues with respect to 35 U.S.C. 101 are adequately addressed.

Independent claim 24 recites a computer-readable medium that stores a computer program that, when executed by a computer, makes a computer perform embedding a code into

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image data. The process recited therein contains the allowable subject matter found in claim 1.

Thus, claim 24 is deemed to be allowable for the reasons set forth for claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is (571)272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Thompson/
Primary Examiner, Art Unit 2625

30 September 2010